Catalog 1304-1

Packaged Terminal Air Conditioner with Top-Mounted Hydronic Heat

Model PGAN - Unit Sizes 007 – 015

Engineered for flexibility and performance™

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PGAN Supportive Literature:

- IM 1193 - Packaged Terminal Air Conditioner, 16" × 42" PGAN with Top-Mounted Hydronic Heat Installation & Maintenance Manual
- IM 1196 - Packaged Terminal Air Conditioner - Wall Sleeve Installation, 16" × 42" PGAN with Top-Mounted Hydronic Heat Installation & Maintenance Manual
- IM 1198 - Installing The Top-Mounted Hydronic Heat Section To Model PGAN Packaged Terminal Air Conditioner

Daikin Model PGAN Product Nomenclature

Note: *For Illustration purposes only. Not all options available with all models.*

P GAN 1 009 E D A AY YYYYY LB SYY B L

Unit Type
P = PTAC

Product Identifier
PGAN = Air Conditioner

Design Series
1 = A Design 1

Unit Size
007 = 7,000
009 = 9,000
012 = 12,000
015 = 15,000

Voltage
A = 115-60-1
E = 208/230-60-1
J = 265/277-60-1

Brand Name
D = Daikin

Refrigerant
A = R-410A

Damper Type
Damper Control
AY = Automatic
MY = Manual

Application Type
YYYYY = None

Power Connection
LB = Long Cord – 64" (Standard)
YY = None - Hardwired to unit

Upgrade Packages
SYY = Seacoast
AYY = Acoustics
BYY = Seacoast and Acoustics
YYY = None

SKU
B = Build to Order

Warranty
A = Standard
C = 4 Yr Extnd. Comp.
L = 4 Yr Extnd. Refrig.
X = Special

Note: An optional unit-mounted thermostat kit or 24 volt wall-mounted thermostat kit is required to operate unit.

16" × 42" Model PGAN with Top-Mounted Hydronic Heat

Introduction

Years of Experience Matter

As the world's largest heating, ventilation and air-conditioning manufacturer, Daikin stands behind its product with the strength of a global organization. With Daikin representation and quality U.S. manufactured products; we continue to provide fast delivery and hands-on support that you've come to expect to make your project a success.

Daikin has added the new model PGAN to its family of packaged terminal air conditioners, ideal for new construction, renovation and replacement projects. The PGAN offers high economic value with a design that delivers energy efficiency, low sound levels and superior reliability, while offering these advantages:

- AHRI certified performance that meets ASHRAE-90.1 energy efficiency standards mandated by the United States Department of Energy
- Quiet operation, and by adding the sound reduction option, results in a quiet, relaxing environment.
- Specialized features and built-in safeties for hydronic heat applications
- Quality construction with value-added, factory supplied options
- The Standard paint on the PGAN cabinet is Antique Ivory with a contrasting Oxford Brown subbase. This color combination blends well with most interior color schemes. The durable electrostatically applied, baked on, antique ivory urethane powder paint resists smudges and corrosion. For custom colors, refer to Form 2F-1188 and supplemental Form 2F-1188A.

The Hydronic Experts

Daikin is a leading manufacturer of hydronic heat equipment. We specialize in providing hydronic heat with a host of configurable options.

Modes

- DX Cooling with hot water hydronic heat
- DX Cooling with steam hydronic heat

Controls With Built-In Hydronic Logic

- Normally open/normally closed valve control
- Heat fan lockout – prevent the fan from coming on until there is heat in the pipes.

Quiet Comfort

Our PTAC has been redesigned to be the quietest PTAC we've ever built. The unit's design and construction provide a quiet environment, allowing guests to enjoy peaceful, sleep-filled nights.

1 Cooling PGAN Chassis

- Energy efficient design with two speed condenser motor, rotary compressor and quiet two speed indoor tangential fan
- Filter drier to protect the compressor and lengthen the life of the unit
- 100% run tested, and leak-tested during the manufacturing process, and again prior to shipment
- Indoor air quality (IAQ) fresh air damper (manual or automatic) and cleanable filter
- Optional sound reduction and seacoast package
- 64" LCDI safety plug reaches both sides of the chassis

2 Hydronic Heat Section

- Snap on, top-mounted hydronic heat coil (steam or hot water)
- Right-hand, left-hand or opposite-end piping configurations for ease of installation
- Heat fan lockout – prevents fan operation until there is heat in the pipes
- Hydronic control logic for normally open/normally closed valve control
- Built-in coil freeze protection for low ambient conditions

3 Unit-Mounted Digital Controls

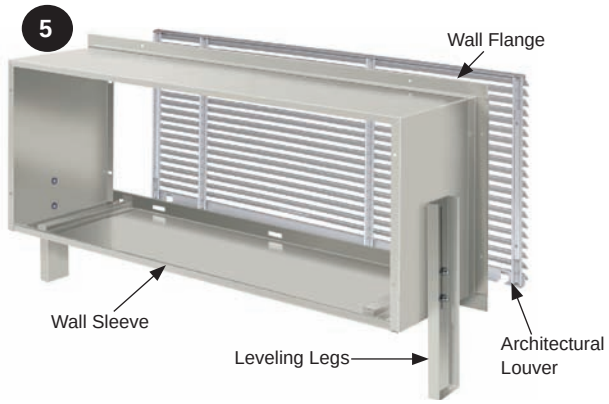
- Easy to use digital readout when selecting fan mode and speed, mode of operation and temperature display
- Optional Non-programmable with auto changeover, fan speed control, hardwired
- Optional 7-day programmable with auto changeover, fan speed control, hardwired
- Optional remote mounted thermostat controls available

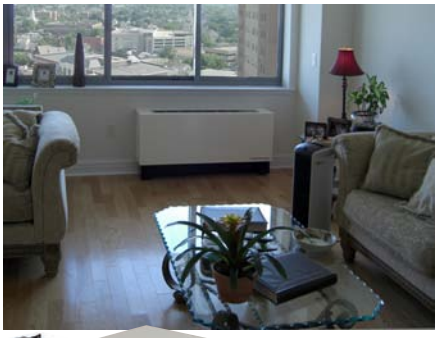
4 Room Cabinet

- Furniture grade heavy-gauge steel construction with flush mounted touchpad control
- Customized depth, colors, grille and kickplate available
- Front or bottom return configurations

5 Wall Sleeve

- Heavy-gauge steel construction with powder-coated finish in standard or recessed louver design
- Customized depth, wall flange and leveling legs
- Outside air louver with extruded architectural blade design





Control Blockoff for Wall-Mounted Thermostat

Note: An optional unit-mounted thermostat kit or 24 volt wall-mounted thermostat kit is required to operate unit.

AHRI Performance Data

Table 1: AHRI Performance Data[5]

Cooling Model		007			009			012		015	
Cooling	BTUH	7200	7600	7600	9000	9000	8800	11700	11700	14000	14000
	Sensible BTUH	5300	5700	5700	6000	6000	5900	7800	7800	9400	9400
	EER	11.7	11.5	11.5	11.1	11.1	11.1	10.3	10.3	9.6	9.6
	Volts	115	230/208	265	115	230/208	265	230/208	265	230/208	265
	FLA	7.5	4.1	3.6	8.9	4.7	4.2	6.2	5.4	7.3	6.3
	Watts	620	660	660	810	810	790	1140	1140	1460	1460
Hydronic Heat	Valve & Fan Motor Amps	n/a	0.4	0.37	n/a	0.4	0.37	0.4	0.37	0.3	0.31
	Min. Circuit Amps	8.9	4.8	4.2	10.7	5.6	4.9	7.4	6.4	8.8	7.6
	Hot Water BTUH	14300 / 13800			14300 / 13800			14300 / 13800		15200 / 13800	
	Steam BTUH	19500 / 19400			19500 / 19400			19500 / 19400		20600 / 20500	
	Time Delay Fuse	15A	15A	15A	15A	15A	15A	15A	15A	15A	15A
	NEMA Receptacle	5-15R	6-15R	n/a	5-15R	6-15R	n/a	6-15R	n/a	6-15R	n/a
Airflow		High	Low	n/a	High	Low	n/a	High	Low	High	Low
	Cool - Wet Coil	315	280	n/a	315	280	n/a	315	280	350	315
	Heat - Dry Coil	335	300	n/a	335	300	n/a	335	300	370	335
	Vent	70	56	n/a	70	56	n/a	70	56	70	56

Note: *Actual Vent performance will vary with application and installation conditions.*

Dehumidification (pints/hr)	1.7	1.7	1.7	2.2	2.2	2.2	3.6	3.6	4.4	4.4
Net Weight (lbs)	103	103	103	107	107	107	107	107	118	118
Ship Weight (lbs)	118	118	118	122	122	122	124	124	135	135
Cabinet/Wall Sleeve (lbs)	36			36			36		36	

Notes: *1. Based on ASHRAE and AHRI test conditions of 95°F DB/75°F WB outside, 80°F DB/67°F WB inside.*
2. Based on ASHRAE and AHRI test conditions of 47°F DB outside, 70°F DB inside.
3. All 265 volt models must use a sub-base or be hard-wired with a disconnect switch.
4. Water – Based on ASHRAE and AHRI test conditions of 200°F EWT, 180°F LWT, 70°F EAT with a 1.8 gpm flow rate.
5. Over current protection for all units is 15 amps.
6. Overcurrent protection on 265 volt models must be cartirdge-style time-delay fuses (included and factory installed on all 265 volt chassis.
7. Cooling Full Load Amps includes Compressor, IDF and ODF FLA's.

Easy To Use Digital Controls

The optional non-programmable touchpad control offers digital readout and is easy to use when selecting fan speed, mode of operation and temperature setting. A precise digital temperature display provides occupants with an exact comfort setting, thereby eliminating uncomfortable temperature swings and costly overheating/overcooling associated with non-digital electro-mechanical controls.

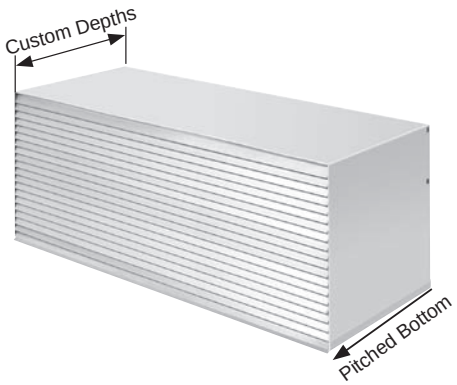
Figure 1: Optional Non-Programmable or Programmable Digital Touchpad Control, or Remote Thermostat Control

Note: An optional unit-mounted thermostat kit or 24 volt wall-mounted thermostat kit is required to operate unit.

Wall Sleeves

Constructed of galvanized, phosphatized, heavy-gauge steel with an Antique Ivory powder paint corrosion-resistant finish. Wall sleeves are installed through the wall as shown on the plans and have factory provisions for use of appropriate fastening devices to secure the sleeve to the wall. They can be ordered to custom depths, and recessed louver wall sleeves have a pitched bottom for positive removal of moisture to the outside. An optional factory-welded brickstop flange is provided based on architectural specifications.

Figure 2: Wall Sleeve with Recessed Louver Design



Wall Sleeve Extension

The standard wall sleeve will accommodate the maximum wall thickness described in Table 2. For thicker walls, wall sleeve extensions are available from your local distributor. Air splitters will be included in the wall sleeve extension as shown in the illustrations below.

Note: *When installing a new chassis into an existing wall sleeve with an extension, it will be necessary to relocate the two air splitters to match the dimensions shown in the illustration (see Table 3).*

Figure 3: Wall Sleeve Extension and Splitter Details

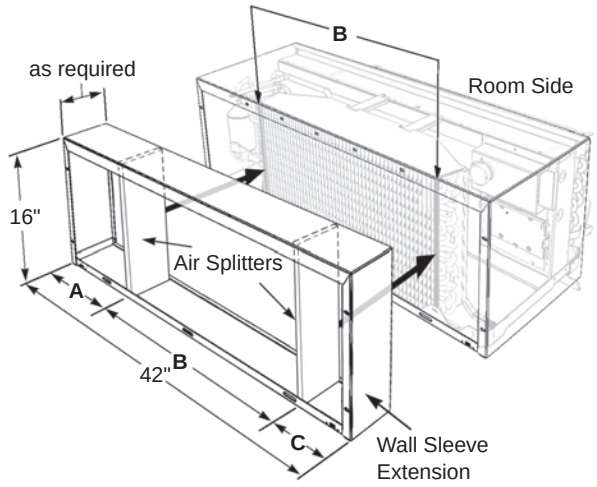


Table 2: Maximum Wall Thickness without Sleeve Extensions

Louver Type	Maximum Wall Thickness	
	No Subbase	Standard Subbase
Stamped 3/8"	14 1/8"	9 1/2"
Architectural 1 1/8"	14 7/8"	10 3/8"

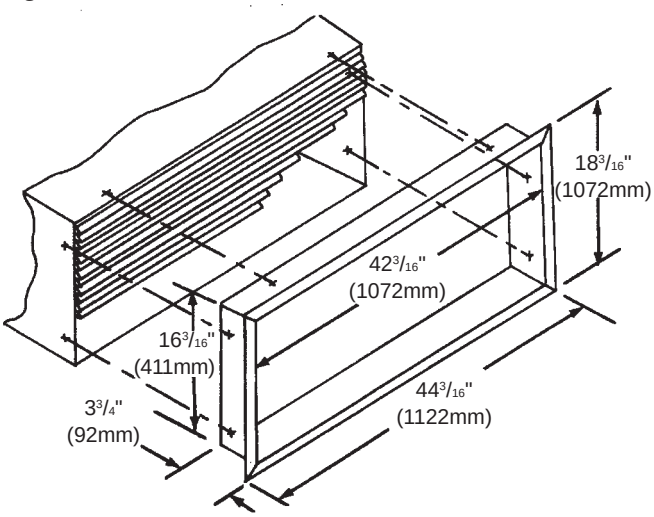
Table 3: Wall Sleeve Extension Splitter Locations

Dimension	16" x 42"
A	9 9/16"
B	24 5/16"
C	6 1/8"

Louver Frame

Louver frames are used for panel wall and thin wall applications to assure positive anchoring to the wall. The wall sleeve is installed flush with the outside of the building. The louver frame is placed around the wall sleeve.

Figure 4: Louver Frame Dimensions



Note: *Wall Sleeve rough opening when using a Louver Frame must be 16 5/8" × 42 5/8"*

Exterior Louvers For Standard Wall Sleeves

Two styles of exterior louvers are available. The standard flush stamped louver is a one-piece stamped aluminum type that is finished natural and clear anodized. Attractive, rugged architectural louvers are extruded aluminum and are finished natural and clear anodized (optional colors are also available).

Louvers by others are acceptable as long as they meet factory specifications. They must have a minimum free area of 70% or a pressure drop not exceeding .05 in. w.g. at 300 fpm face velocity, and a blade design that will not cause recirculation of condenser air.

Figure 5: Flush Stamped Louver

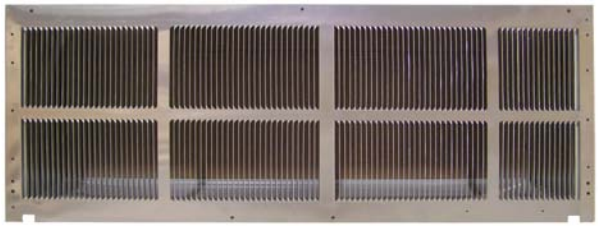
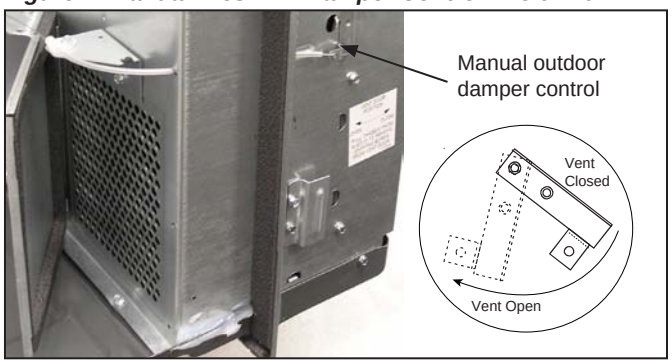


Figure 6: Architectural Louver

Manual Fresh Air Damper Control

Outdoor fresh air is brought in through a manual damper door, using the control lever, hidden from the occupant's view to allow you to manage ventilation requirements.

Figure 7: Manual Fresh Air Damper Control - Left End



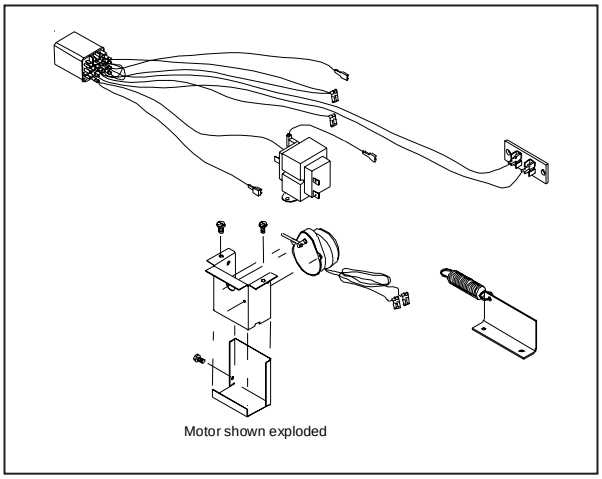
Auto Fresh Air Damper Option

The optional fresh air damper automatically opens and closes the outdoor air vent door depending on fan operation:

Figure 8: Auto Fresh Air Damper

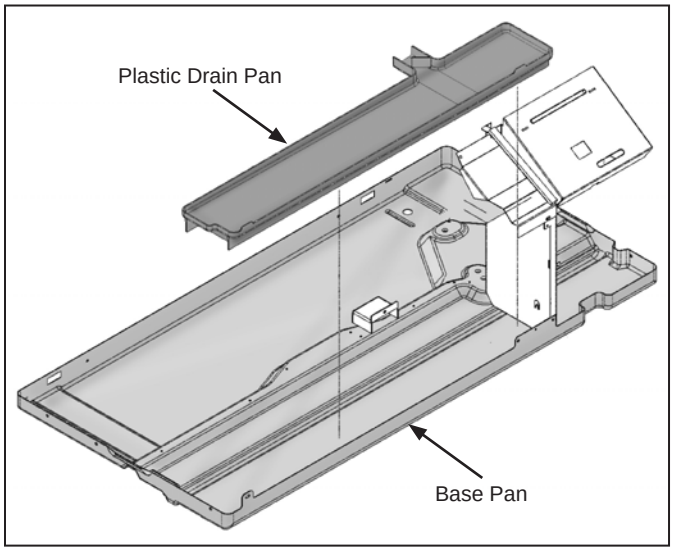
- Opens when the indoor fan is operating to bring in outside air for improved indoor air quality.
- Closes when the indoor fan is off to prevent cold drafts.

Figure 9: Power Door Kit



Positive Condensate Removal

Figure 10: Sloped Basepan & Plastic Drain Pan



Humidity controls and positive condensate removal features together greatly reduce or eliminate excess condensate. In the process, comfort is improved and energy reduced by using the PGAN's advanced digital controls to intelligently manage ventilation air and humidity within the conditioned space.

Condensate Dispersion System

Our condensate dispersion system removes condensate from indoor cooling operation by throwing water directly on to the outdoor coil for rapid evaporation and increased cooling efficiencies. The slinger ring on the new, enhanced fan draws water up and into the fan blades. This water is then atomized and evaporated into the atmosphere through the condenser. Increased surface area from the coil allows more water to be evaporated on the sides of the coils and helps to minimize condensate run-off.

Removable Condenser Fan Motor

Allows easy access to enable regular cleaning of coils, which is essential to maintain unit efficiency and protect the compressor for long unit life.

Freeze Protection

When the unit senses temperatures of 40°F or lower in an unoccupied room, the heat mode is automatically initiated to prevent freezing, and the outdoor fan and compressor are stopped.

Seacoast Construction (Option)

PGAN units can be ordered with components treated with special coatings that extend the life of the unit dramatically, helping to protect it from corrosive vapors such as salt water vapor, chlorine, and acid vapor.

Permanent Cleanable Filters

Room side return air is filtered through this permanent, washable polypropylene mesh filter. It is UL listed class II, 38% average arrestance efficiency (ASHRAE test), with low resistance to airflow (0.02 w.g. at 300 cfm), and high dust holding capacity (55 grams).

Figure 11: Cleanable Filter

- Filters all return air to promote good indoor air quality.
- Easy to access and maintain.

Optional Programmable Electronic Thermostat

(P/N 910140679)

7-Day Programmable, Auto Changeover, Fan Speed Control, Hardwired

- 7-Day Programmable
- Backlit Display
- Single Stage Heat/Cool Systems
- Field Calibration
- Auto Changeover
- Button Lockout Function
- Two Speed Fan Control
- SimpleSet™ Programming
- Remote Temperature Sensor Capability
- Title 24 Compliant / No Batteries Required
- Relay Outputs (minimum voltage drop in thermostat)
- Ideally Suited for:
  - – Residential (New Construction/Replacement)
  - – Light Commercial

Specifications

Electrical rating:

- 24 VAC (18-30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load

Temperature control range:

45°F to 90°F (7°C to 32°C) Accuracy: ± 1°F (± 0.5°C)

System configurations:

1-stage heat, 1-stage cool, heat pump

Timing:

Anti-short Cycle: 5 minutes

Backlight Operation: 10 seconds

Terminations:

C, RH, RC, W, Y, B, O GL, GH, S1, S2

For detailed installation, operation and application refer to Operation & Application Guide LIAF186

Optional Non-Programmable Electronic Thermostat

(P/N 910140678)

Non-Programmable, Auto Changeover, Fan Speed Control, Hardwired

- Backlit Display
- Single Stage Heat/Cool Systems
- Field Calibration
- Auto Changeover
- Button Lockout Function
- Two Speed Fan Control
- Remote Temperature Sensor Capability
- Title 24 Compliant / No Batteries Required
- Relay Outputs (minimum voltage drop in thermostat)
- Ideally Suited for:
  - – Residential (New Construction/Replacement)
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Anti-short Cycle: 5 minutes

Backlight Operation: 10 seconds

Terminations:

C, RH, RC, W, Y, B, O GL, GH, S1, S2

For detailed installation, operation and application refer to Operation & Application Guide LIAF187

Cooling or Heating – Manual Operation

The PGAN internal unit controller has built-in features such as random start, compressor time delay, night setback, load shed, shutdown. The 24 volt low voltage terminal strip is set so R-G energizes the fan. R-W1 energizes the fan and compressor.

User Controls

A 4 button touch key pad, with a High/Low Fan speed and Auto/On Switch located behind the control door, controls both temperature and operation mode.

Thermostat Setting

4-button touchpad with display.

Pressing the COOL thermostat control and the down arrows will provide a cooler room temperature. Pressing the HEAT thermostat control and the up arrow keys will provide a warmer room temperature.

Power Cord

230/208V and 115V units are equipped with a LCDI power cord and can open the electrical circuit to the unit. In the event the unit does not operate, check the reset button located on or near the head of the power cord as part of the normal troubleshooting procedure.

Fan Speed

The fan speed selector switch will deliver high, low or auto fan speed to circulate room air.

Note: *The AUTO selection will not be available if a fan speed is selected without COOL or Heat selection.*

Fan Operation HIGH or LOW with HEAT or COOL mode selected

- The fan will run in the selected speed.
- Fan Operation AUTO with HEAT or COOL mode selected - The fan will run in low and high speed. The changes in fan speed are automatic.

Diagnostic Light - Internal Control Board

The green diagnostic light located in the lower left hand corner of the internal control board and indicates operation warnings. This light usually indicates that either the filter or coils need cleaning.

Master Switch

The master switch disconnects power to all of the system components. When this switch is in the off position, the compressor, fan motor, reversing valve, and electric resistance heater will all be de-energized.

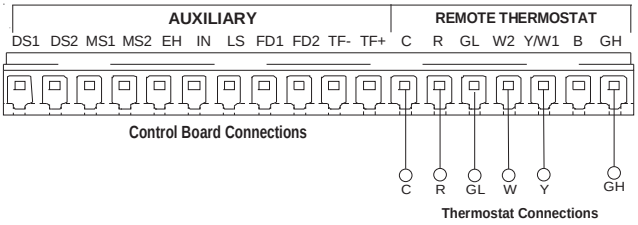
Remote Thermostats

NOTICE

When using existing thermostats by others;
There are two basic types of thermostats manufactured today; those with relay contacts, and those with solid-state triacs. If you open the thermostat and don't see relays then you can assume it to be solid state.
Manufacturers of solid state output thermostats include loading resistors on their installation kits. These are of low Ohm value, approximately 560 Ohm and 3W. The resistors are meant to load the thermostat outputs in order for the output voltage to be either 0 or 24VAC, i.e. no floating voltage. These resistors are connected from W, Y, G to common (C), respectively. Therefore, if you are using existing solid-state thermostats, you may have to add loading resistors for your PTAC controls to work properly. Daikin thermostats do not require this modification.

The PGAN unit can be configured to be controlled by a "manufacturer-approved" remote thermostat. When in the remote mode, the unit will only respond to the thermostat inputs (terminal strip positions R, W2, Y/W1, and GH as shown in Figure 12.

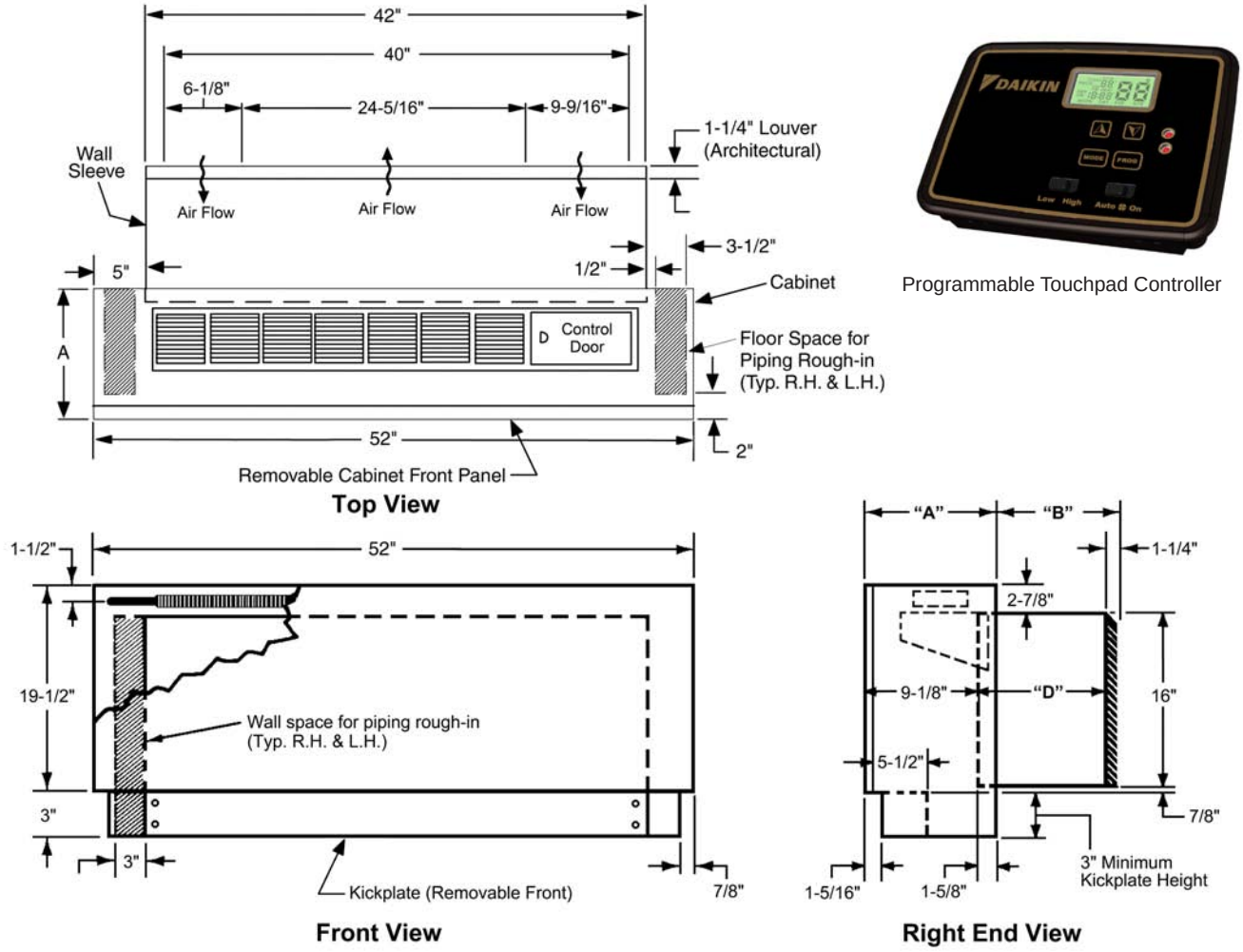
Figure 12: Remote Thermostat Control Terminals


AUXILIARY
REMOTE THERMOSTAT
DS1 DS2 MS1 MS2 EH IN LS FD1 FD2 TF- TF+ C R GL W2 Y/W1 B GH
Control Board Connections
C R GL W Y GH
Thermostat Connections

Notes: *In remote mode, the 3-minute compressor time delay, the random restart feature and the freeze protection feature are all active. When a remote wall-mounted thermostat is used, the delay may be a total of 8-minutes.*

PGAN Dimensions

Figure 13: PGAN Unit Dimensions



Programmable Touchpad Controller

Note: *Electrical rough-in should be located behind kickplate (removable front) and below wall sleeve.*

Steam

Figure 14: Left-hand supply and return

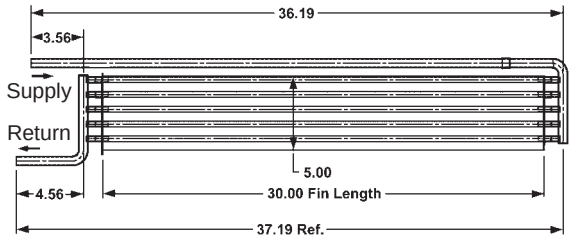


Figure 15: Right-hand supply and return

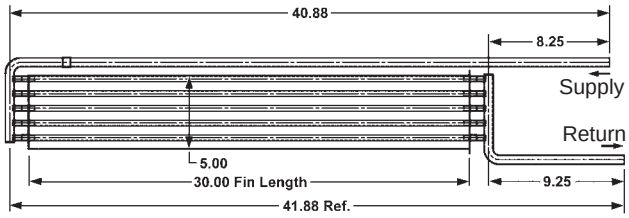


Figure 16: Right-hand supply, left-hand return

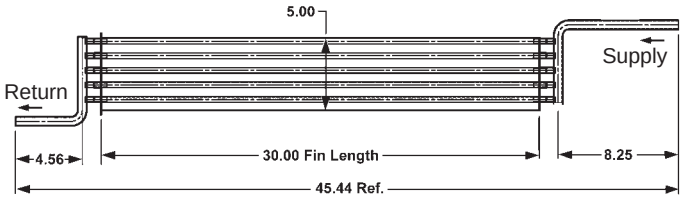
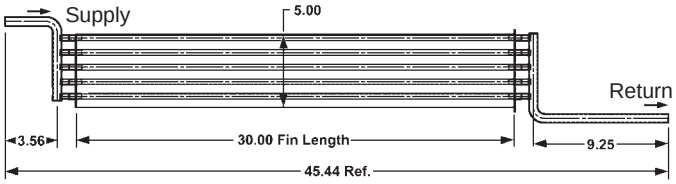


Figure 17: Left-hand supply, right-hand return



Hot Water

Figure 18: Left-hand supply and return

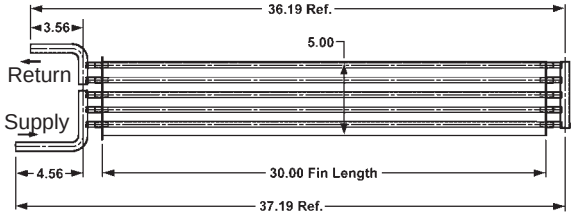


Figure 19: Right-hand supply and return

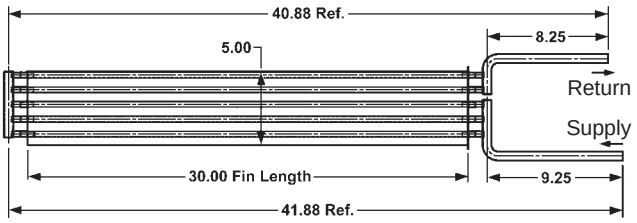
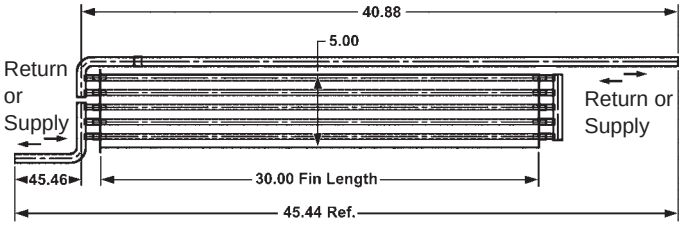


Figure 20: Left-hand supply, right-hand return or Right-hand supply, left-hand return



Note: *Piping connections are 5/8" O.D. copper sweat and are symmetrical R.H. or L.H. for same end supply and return.*

Piping

Recommended Piping Detail (Field-Installed)

Figure 21: Typical Hot Water Coil Piping

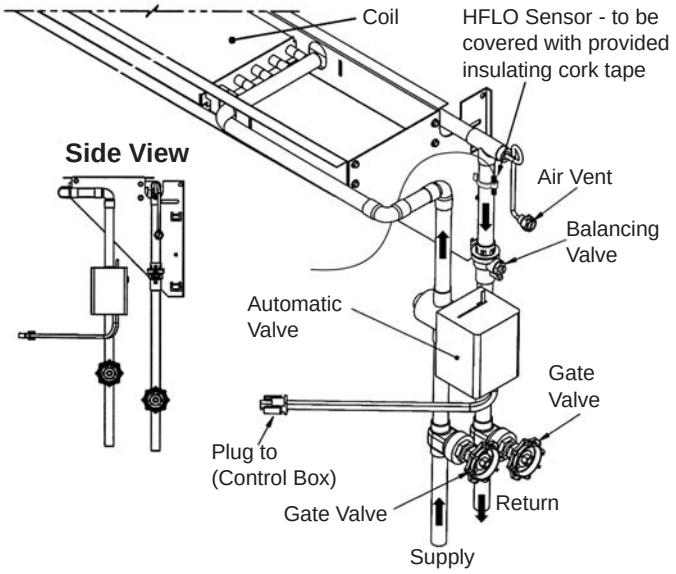
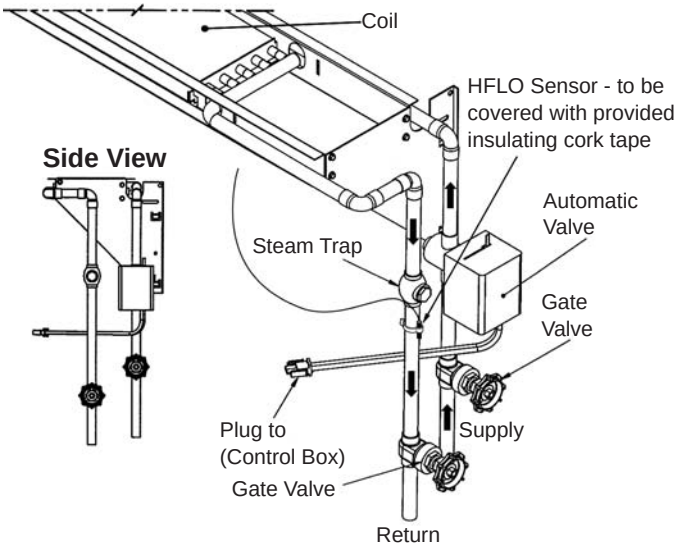


Figure 22: Typical Steam Coil Piping



How to Select The Correct Wall Cabinet

The minimum cabinet depth is 10.75". This is required because the wall sleeve MUST extend a minimum of 1.625" into the room and 9.125" is required to cover the chassis. This totals 10.75".

Standard cabinets range from 10.75" to 18.75" in 1" increments. For other requirements, consult the factory.

If the wall sleeve extends into the room more than 1.625", add the inside measurement to the 9.125" required to cover the chassis. This will be the depth of the wall cabinet.

For example:

The wall sleeve extends 3.25" into room + 9.125" = 12.75" deep cabinet or if the wall sleeve extends 9.25" into room + 9.125" = 18.75" deep cabinet would be the closest fit.

Wall Opening Requirements – 16" × 42"

When roughing in the opening for the wall sleeve, sufficient clearance from the walls and floor is required. The wall sleeve should be positioned a minimum of 5/8" from the finished side wall to accommodate the room cabinet. A minimum distance of 3" above the finished floor is required for return air.

The rough opening should measure 16-1/4" high × 42-1/4" wide. When using a louver frame, the opening must measure 16-5/8" × 42-5/8". Louver frames should be used for panel wall and thin wall applications to provide positive anchoring to the wall.

Electrical Service

All wiring should be in accordance with all local and National Electrical Code requirements.

Units are supplied with an attachment cord and plug which exit from the bottom of the conditioner on the control side. The cord for 115V, 208V and 230V has a usable length of 64" (1626mm) from where it exits the conditioner. The use of extension cords to increase the length of the plug/cord set is not recommended. Units to operate on 265V are supplied with a 18" (457mm) cord for connection to a subbase, or must utilize a hard wired kit.

The attachment plug size should be used to determine the circuit ampacity and overcurrent protection. Time delay, overcurrent protection devices are recommended to prevent unit damage and to avoid nuisance tripping.

Receptacles are generally located beneath the conditioner, on or recessed in the wall so it is concealed by the conditioner overhang and kickplate (see Figure 13).

Standard Wall Sleeve Installation

Masonry Wall Construction Application

***Notes**: 1. Wall sleeve to extend a minimum of 1-5/8" past finished sheetrock.*

2. Wall sleeve should be recessed the thickness of the louver from face of brick so that when louver is installed it is flush with face of building.

Figure 23: Wall Sleeve End View Using Brickstop

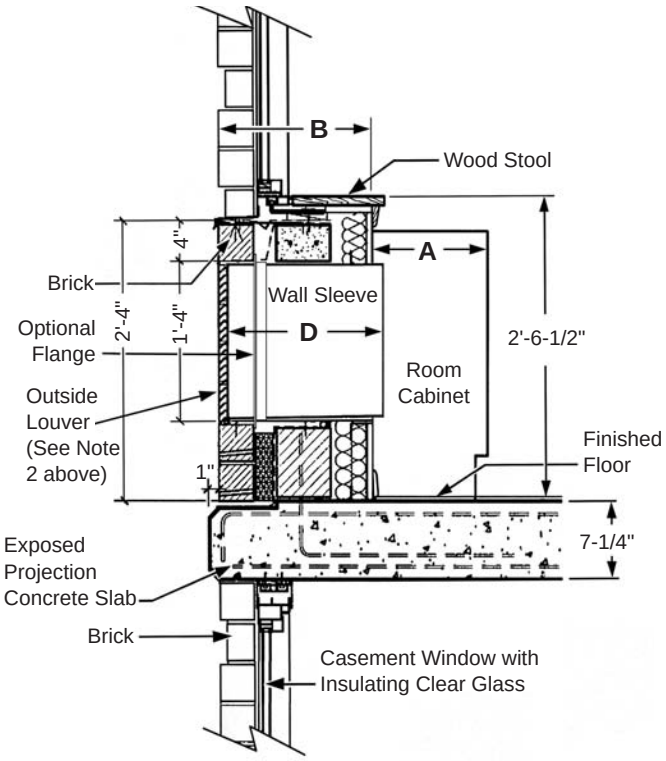


Table 1: Dimensions for Figure 23

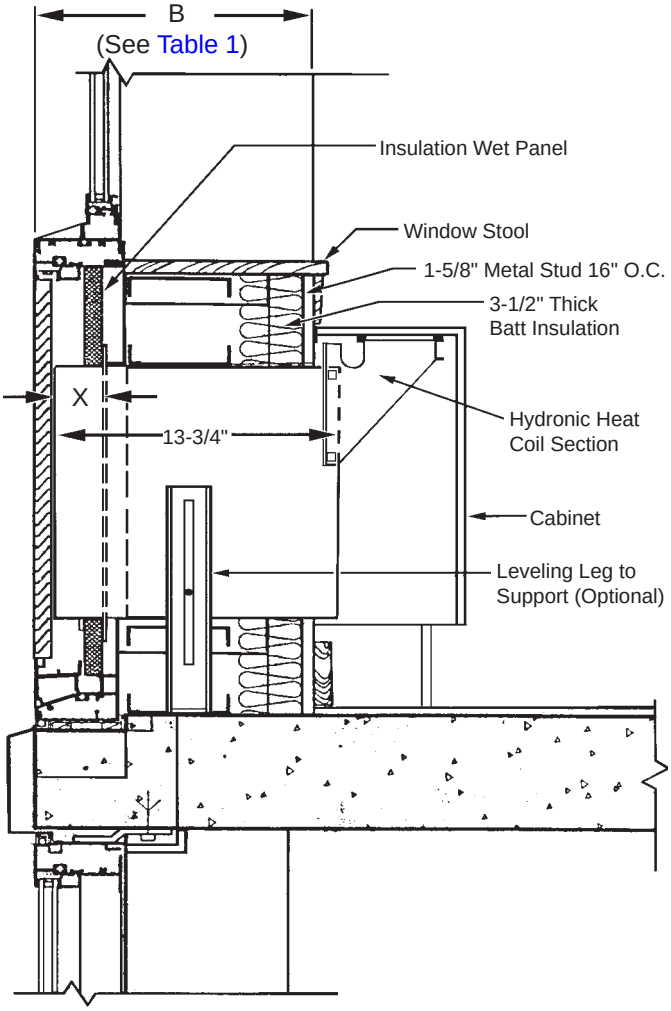
"A" Room Cabinet	"D" Wall Sleeve	"B" Wall Thickness
18¾ (476 mm)	13¾ (349 mm)	4¾–5¾ (121–146 mm)
17¾ (451 mm)	13¾ (349 mm)	5¾–6¾ (146–171 mm)
16¾ (425 mm)	13¾ (349 mm)	6¾ –7¾ (171–197 mm)
15¾ (400 mm)	13¾ (349 mm)	7¾ –8¾ (197–222 mm)
14¾ (375 mm)	13¾ (349 mm)	8¾ –9¾ (222–248 mm)
13¾ (349 mm)	13¾ (349 mm)	9¾ –10¾ (248–273 mm)
12¾ (324 mm)	13¾ (349 mm)	10¾ –11¾ (273–298 mm)
11¾ (298 mm)	13¾ (349 mm)	11¾ –12¾ (298–324 mm)
10¾ (273 mm)	13¾ (349 mm)	12¾ –13¾ (324–349 mm)
10¾ (273 mm)	14¾ (375 mm)	13¾ –14¾ (349–375 mm)
10¾ (273 mm)	15¾ (400 mm)	14¾ –15¾ (375–400 mm)
10¾ (273 mm)	16¾ (425 mm)	15¾ –16¾ (400–425 mm)
10¾ (273 mm)	17¾ (451 mm)	16¾ –17¾ (425–451 mm)

Standard Size Wall Sleeve

Panel/Window Wall Sleeve Installation

Wall Sleeve Depth, Wall Thickness, & Optional Continuous Flange Dimensions

Figure 24: Wall Sleeve End View with Continuous Flange and Leveling Leg



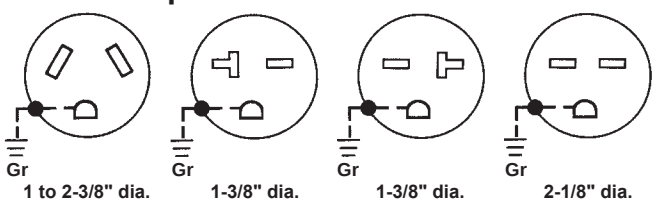
***Notes:** 1. Flange dimension "X" is "as required" and is usually provided to the factory to be secured to wall sleeve during fabrication.*

2. Dimension "B" is wall thickness (see Table 1).

3. Given dimensions are standard.

**These are typical but may be adjusted upon request by contacting your local Daikin Representative.*

NEMA Receptacles



1 to 2-3/8" dia. 7-20R 20 Amp, 265V | **1-3/8" dia. 5-20R 20 Amp, 120V** | **1-3/8" dia. 6-20R 20 Amp, 202V** | **2-1/8" dia. 6-30R 30 Amp, 250V**

Wall-Mounted Thermostats – Quick Selection Guide

Table 2: Wall Mounted Thermostats – Quick Selection Guide

Thermostat Item Number	910116771	910116772	910116774
Single Stage	•	•	•
Two Stage			•
Heat Pump	•	•	•
Manual Changeover (Cool/Off/Heat)	•	•	•
Settable Differential Range	•	•	•
Auto Changeover			•
Status LEDs			•
Backlit Display	•	•	•
7-Day or 5-2 day or 5-1-1 Programmable		•	•
Temporary Hold		•	•
Programmable Fan On/Off Delay			•
Non-Programmable	•		
Hard Wired	•	•	•
Wireless			
4 or 5 Wire Capable	•	•	•
Freeze Protection	•		
Fan Switch - On/Auto	•	•	•
Lockout Feature		•	•
Fahrenheit or Celsius Display	•	•	•
Remote Sensor Option			•
Power Loss Memory Protection	•	•	•
Anti-Short Cycle Delay	•	•	•
Max/Min. Set Point Control		•	•
Energy Management Interface			
California Title 24 Compliant	•	•	•

Remote Thermostat Control

The Remote Thermostat can be any thermostat that can interface with an electronic thermostat via RCBWYG terminals. The Internal Control Board (ICB) must be configured for C1 and L5, and the thermostat wiring harness connected to the thermostat and remote thermostat pins on the ICB. During a call the remote thermostat will pass R back to the controller on a respective terminal. However, the control pad LED display will indicate the mode of operation, and the room temperature.

Notes: *In terms of outputs, there are two types of thermostats: relay contacts and solid state.*

If you open the thermostat and don't see relays then it must be solid state.

Manufacturers of solid state output thermostats include loading resistors on their installation kits. They are of 560 Ohm and 3W value. These resistors are meant to load thermostat solid state outputs in order for the output voltage to be either 0 or 24VAC, i.e. no floating voltage. These resistors are connected from W, Y, G to common (C), respectively.

You can wire any type of 24Vac thermostat straight into the REMOTE T'STAT connector Internal Control Board.

Operating Instructions

Cooling or Heating – Manual Operation

The PGAN unit controller has built-in features such as random start, compressor time delay, night setback, load shed, shutdown. The 24 volt low voltage terminal strip is set so R-G energizes the fan. R-W1 energizes the fan and compressor.

User Controls

A 4 button touch key pad, with a High/Low Fan speed and Auto/On Switch located behind the control door, controls both temperature and operation mode.

Thermostat Setting

4-button touchpad with display.

Pressing the COOL thermostat control and the up or down arrows will provide a cooler room temperature. Pressing the HEAT thermostat control and the up or down arrow keys will provide a warmer room temperature.

LCDI Power Cord

230/208V and 115V units are equipped with a LCDI power cord and can open the electrical circuit to the unit. In the event the unit does not operate, check the reset button located on or near the head of the power cord as part of the normal troubleshooting procedure.

Fan Speed

The fan speed selector switch will deliver high, low or auto fan speed to circulate room air.

Note: *The AUTO selection will not be available if a fan speed is selected without COOL or Heat selection.*

Fan Operation HIGH or LOW with HEAT or COOL mode selected

- The fan shall run in the selected speed.
- Fan Operation AUTO with HEAT or COOL mode selected - The fan will run in low and high speed. The changes in fan speed are automatic.

Diagnostic Light - Internal Touchpad

The green diagnostic light located in the lower left hand corner of the touchpad and indicates operation warnings. This light usually indicates that either the filter or coils need cleaning.

Master Switch

The master switch disconnects power to all of the system components. When this switch is in the off position, the compressor, fan motor, reversing valve, and electric resistance heater will all be de-energized.

NOTICE

When using existing thermostats by others;
There are two basic types of thermostats manufactured today; those with relay contacts, and those with solid-state triacs. If you open the thermostat and don't see relays then you can assume it to be solid state.
Manufacturers of solid state output thermostats include loading resistors on their installation kits. These are of low Ohm value, approximately 560 Ohm and 3W. The resistors are meant to load the thermostat outputs in order for the output voltage to be either 0 or 24VAC, i.e. no floating voltage. These resistors are connected from W, Y, G to common (C), respectively. Therefore, if you are using existing solid-state thermostats, you may have to add loading resistors for your PTAC controls to work properly. McQuay thermostats do not require this modification.

To operate this unit with a "manufacturer-approved" remote thermostat, configure the control to be operated by the remote thermostat. Enter configuration mode C1 and then select option Code L5. When in the remote mode, the unit will only respond to the thermostat inputs (terminal strip positions GL (or GH), W2, Y/W1, and B* shown in "Control Board User Inputs" illustration).

Notes: *Once configuration C1 with option code L5 has been selected, the control touchpad will no longer accept inputs other than configuration and diagnostics modes. The room occupant must operate the unit at the remote mounted thermostat.*

In remote mode, the 3-minute compressor time delay, the random restart feature and the freeze protection feature are all active (see Unit Features section). When remote wall-mounted thermostat is used, the delay may be a total of 8-minutes.

Remote Wall-Mounted Thermostats

Thermostat Location

This unit is designed to be operated with remote wall mounted thermostats. For further information on thermostats approved for use with this unit, contact your sales representative.

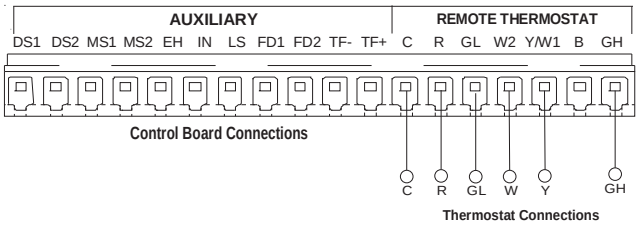
For best performance results, the thermostat should be located approximately five feet above the floor on a vibration free, inside wall in an area with good air circulation.

Do not install the thermostat where it may be affected by the following:

- Dead spots behind doors, in corners or under cabinets
- Hot or cold drafts from air ducts
- Radiant heat from the sun, appliances, or fireplaces
- Concealed pipes and chimneys
- Unheated (uncooled) areas behind the thermostat, such as an outside walls

Consult the instruction sheet packaged with the thermostat for further details on mounting and operation.

Figure 25: Internal Control Board - Remote Control Terminations


AUXILIARY
REMOTE THERMOSTAT
DS1 DS2 MS1 MS2 EH IN LS FD1 FD2 TF- TF+ C R GL W2 Y/W1 B GH
Control Board Connections
C R GL W Y GH
Thermostat Connections

Remote Thermostat Operation

Approved thermostats vary slightly in construction and, with few exceptions, are operated similarly. The following operational description pertains to approved non-programmable thermostats that energize G in Heat and Cool mode.

Heat/Off/Cool Switch

- **OFF** - cooling and heating functions are defeated.
- **HEAT** - the selected room temperature is maintained by cycling the hydronic control valve.
- **COOL** - the selected room temperature is maintained by cycling the air conditioner.

Table 3: Maximum Wire Length for Remote Control Connection

Maximum Wire Length	
Wire Size (AWG)	**Maximum Length Allowed**
#24	400 ft.
#22	600 ft.
#20	900 ft.
#18	1500 ft.
#16	2000 ft.

Non-Programmable Thermostat Specs

Manual Changeover One-Stage Heat and Cool or One-Stage Heat Pump

Part No. 910116771 (1-Pk, White with Wall Plate)

Simple to operate, single push button for one-stage heating and cooling, or single stage heat pump. Zone compatible and 4- or 5 wire compatible (terminal “C” is optional for non-heat pump systems). System “heat-off-cool” switch and fan “on-off” switch.

Specifications

Electrical Rating:

- 24 VAC (18 to 30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load
- 30-minute power loss memory retention

Temperature Control Ranges:

- 45°F to 90°F, Accuracy: ± 1°F

System Configurations:

- 1 stage heat, 1 stage cool or single stage electric heat pump

Terminations:

- R, C, W, Y, O, B, G

Wall-Mounted, 7, 5-2 & 5-1-1 Programmable Thermostat Specs

Manual Changeover One-Stage Heat and Cool or One-Stage Heat Pump

Part No. 910116772 (1-Pk, White with Wall Plate)

Specifications

Electrical Rating:

- 24 VAC (18 to 30 VAC)
- 1 amp maximum per terminal
- 3 amp maximum total load
- 30-minute power loss memory retention
- Easy access terminal block

Temperature Control Ranges:

- 45°F to 90°F, Accuracy: ± 1°F

System Configurations:

- 1 stage heat, 1 stage cool or single stage electric heat pump

Terminations:

- RC, RH, C, W, Y, O, B, G

Standard Auto or Manual-Changeover Two-Stage Heat/ Two-Stage Cool Specs

Part No. 910116774 (1-Pk, White with Wall Plate)

Specifications

Electrical Rating:

- 24 VAC (18 to 30 VAC)
- 1 amp maximum per terminal
- 4 amp maximum total load
- 30-minute power loss memory retention
- Easy access terminal block

Temperature Control Ranges:

- 45°F to 90°F, Accuracy: ± 1°F

System Configurations:

- Single or two-stage heat/cool
- Single or two-stage heat pump

Terminations:

- R, C, W1/O/B, Y1, W2, Y2, G

Optional Remote Sensor

Part No. 107096010 (Used in Conjunction with Thermostat Part No. 910116774 Only)

The Fast, Easy Solution For Temperature Sensing Problems.

- For tamper prone areas
- Poor airflow areas
- Troubled applications
- Foam gasket prevents drafts through wall opening
- Mounts to standard 2" × 4" outlet box
- $2^{3}/_{4}$"W × $4^{1}/_{2}$"H

Energy Saving Options

Automatic Changeover, Remote Mounted Thermostat

Thermostats can be obtained to switch from heating to cooling and from cooling to heating automatically. With automatic changeover, the operation of the heating cycle or the cooling cycle is determined by the temperature requirement of the space. Most thermostats with this feature are set to changeover when the room temperature varies 3-1/2°F from the set-point. The unit is placed in the cooling mode when the set-point is over 3-1/2°F; 3-1/2°F under the set point places the unit in the heating mode. This 3-1/2°F variation is usually adjustable from a 1/2°F dead band to a 5°F dead band. Each cycle is run until the set point temperature is reached, then that cycle is de-energized. On some thermostats, the automatic changeover function can be overridden manually by moving the thermostat selector switch to “heat” or to “cool.”

The fan operation, with an automatic changeover thermostat, is controlled by the fan selector switch. When placed in the “fan” mode, the fan runs continuously. When placed in the “auto” mode, the fan will only energize when the thermostat calls for heating or cooling.

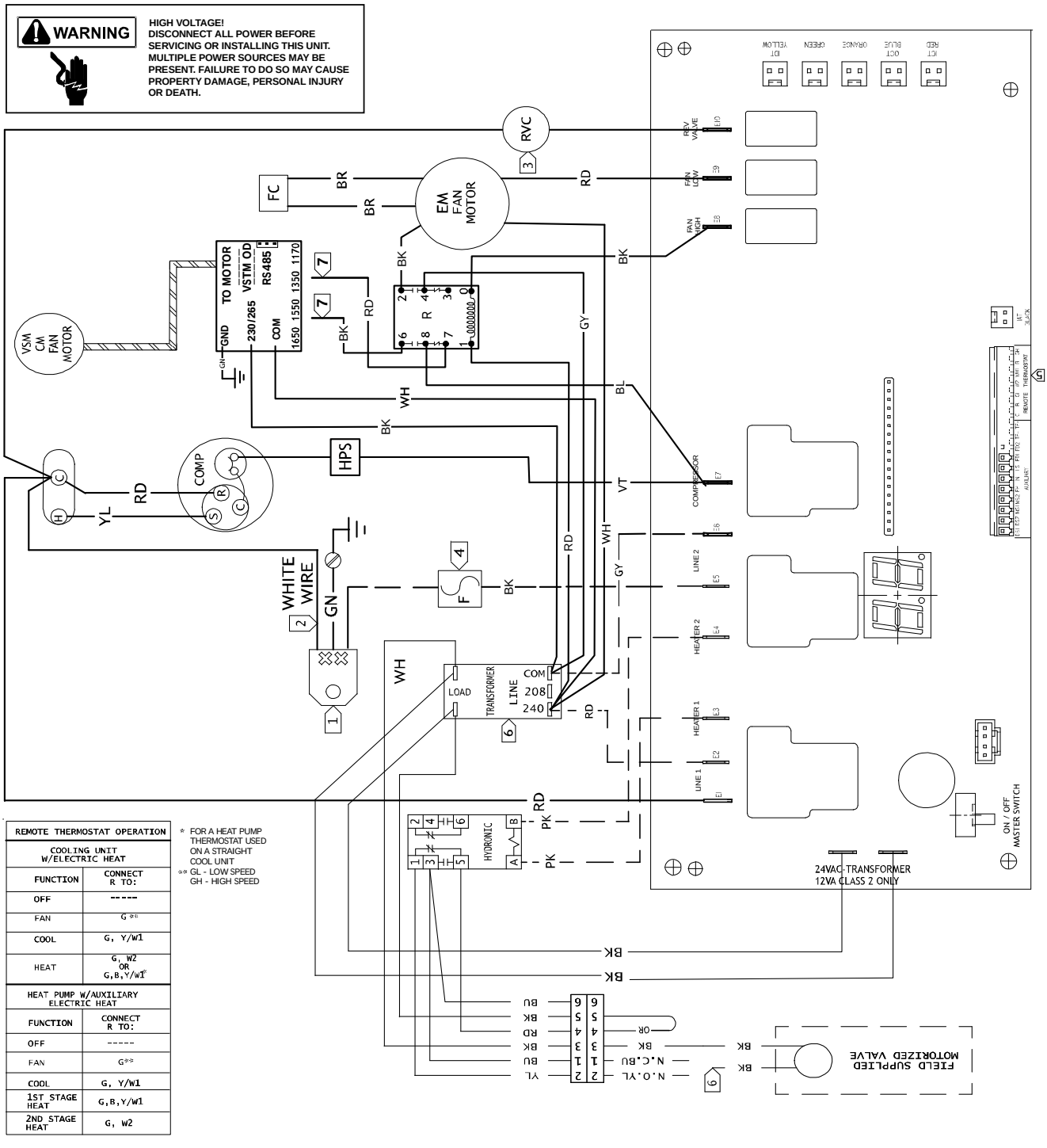
- **Program Setback Control**

  With the Programmable Touchpad, four (4) different periods, Morn., Day, Eve., or Nite, can be independently programmed for start time, Heat setting and Cool setting. There are additional energy savings with Programmed Setback Control.

- **Fresh Air Dampers**

  Daikin Packaged Terminal conditioners can be furnished with an automatic fresh air damper in lieu of a manual fresh air damper. The automatic damper is wired in parallel to the indoor fan relay. When the Fan Switch is placed in the ON mode, the fan and damper cycle as the thermostat cycles.

PGAN with Hydronic Heat

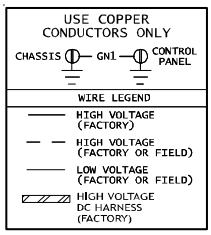


REMOTE THERMOSTAT OPERATION	
COOLING UNIT W/ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G **
COOL	G, Y/W1
HEAT	G, W2 OR G,B,Y/W1*
HEAT PUMP W/AUXILIARY ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G**
COOL	G, Y/W1
1ST STAGE HEAT	G,B,Y/W1
2ND STAGE HEAT	G, W2

* FOR A HEAT PUMP THERMOSTAT USED ON A STRAIGHT COOL UNIT
** GL - LOW SPEED
GH - HIGH SPEED

NOTES :

1. WARNING: DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
2. WHITE WIRE MUST BE CONNECTED AS SHOWN.
3. ON HEAT PUMP MODELS ONLY.
4. BK ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V. FOR 230V & 115 V, CONNECT POWER CORD TO LINE 2.
5. FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
6. 265V AND 115V TRANSFORMER NOT SHOWN.
7. SEE TABLE FOR MOTOR SPEED SELECTION.



CM	OUTDOOR FAN MOTOR
COMP	COMPRESSOR
EM	EVAPORATOR MOTOR
FC	FAN CAPACITOR
F	FUSE
HPS	HIGH PRESSURE SWITCH
HTR	HEATER ELEMENT
R	RELAY
RCCF	RUN CAPACITOR FOR COMPRESSOR AND FAN
RVC	REVERSING VALVE
TR	TRANSFORMER
VSM	VARIABLE SPEED MOTOR
VSTM	VARIABLE SPEED TERMINAL BOARD

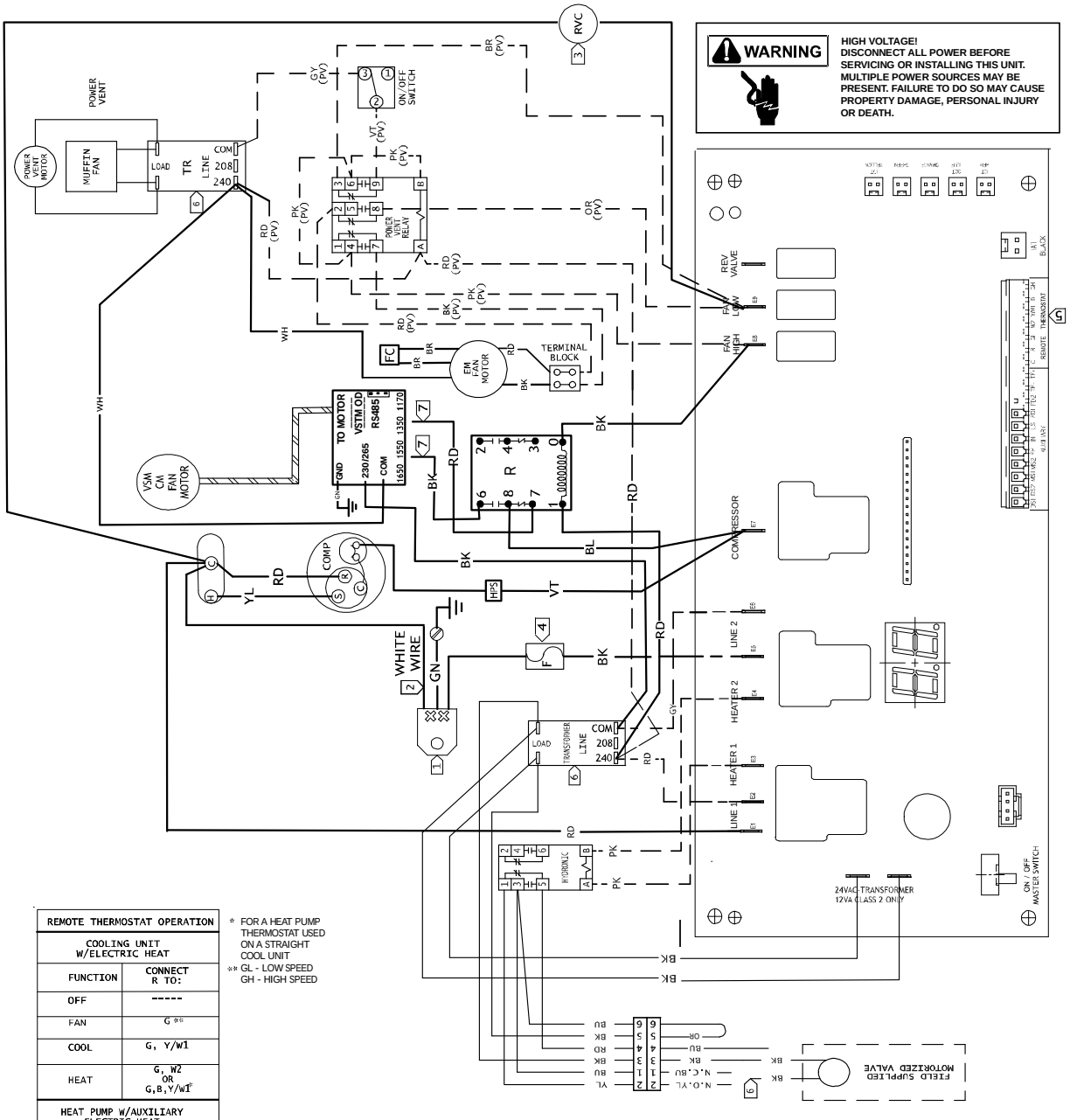
Outdoor Motor Speed Selection		
Model or Mfg. # Starts With	High Speed VSTM Black	Low Speed VSTM Red
MTC15	1650	1350

IO-440
02/2013

Wiring is subject to change.

Wiring Diagram

PGAN with Hydronic Heat, Optional Power Vent and Power Door



REMOTE THERMOSTAT OPERATION	
COOLING UNIT W/ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G **
COOL	G, Y/W1
HEAT	G, W2 OR G,B,Y/W1*
HEAT PUMP W/AUXILIARY ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G**
COOL	G, Y/W1
1ST STAGE HEAT	G,B,Y/W1
2ND STAGE HEAT	G, W2

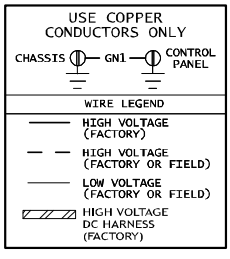
* FOR A HEAT PUMP THERMOSTAT USED ON A STRAIGHT COOL UNIT

** GL - LOW SPEED
GH - HIGH SPEED

Outdoor Motor Speed Selection		
Model or Mfg. # Starts With	High Speed VSTM Black	Low Speed VSTM Red
MTC15	1650	1350

NOTES:

1. WARNING: DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
2. WHITE WIRE MUST BE CONNECTED AS SHOWN.
3. ON HEAT PUMP MODELS ONLY.
4. BK ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V. FOR 230V & 115 V, CONNECT POWER CORD TO LINE 2.
5. FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
6. 265V AND 115V TRANSFORMER NOT SHOWN.
7. SEE TABLE FOR MOTOR SPEED SELECTION.

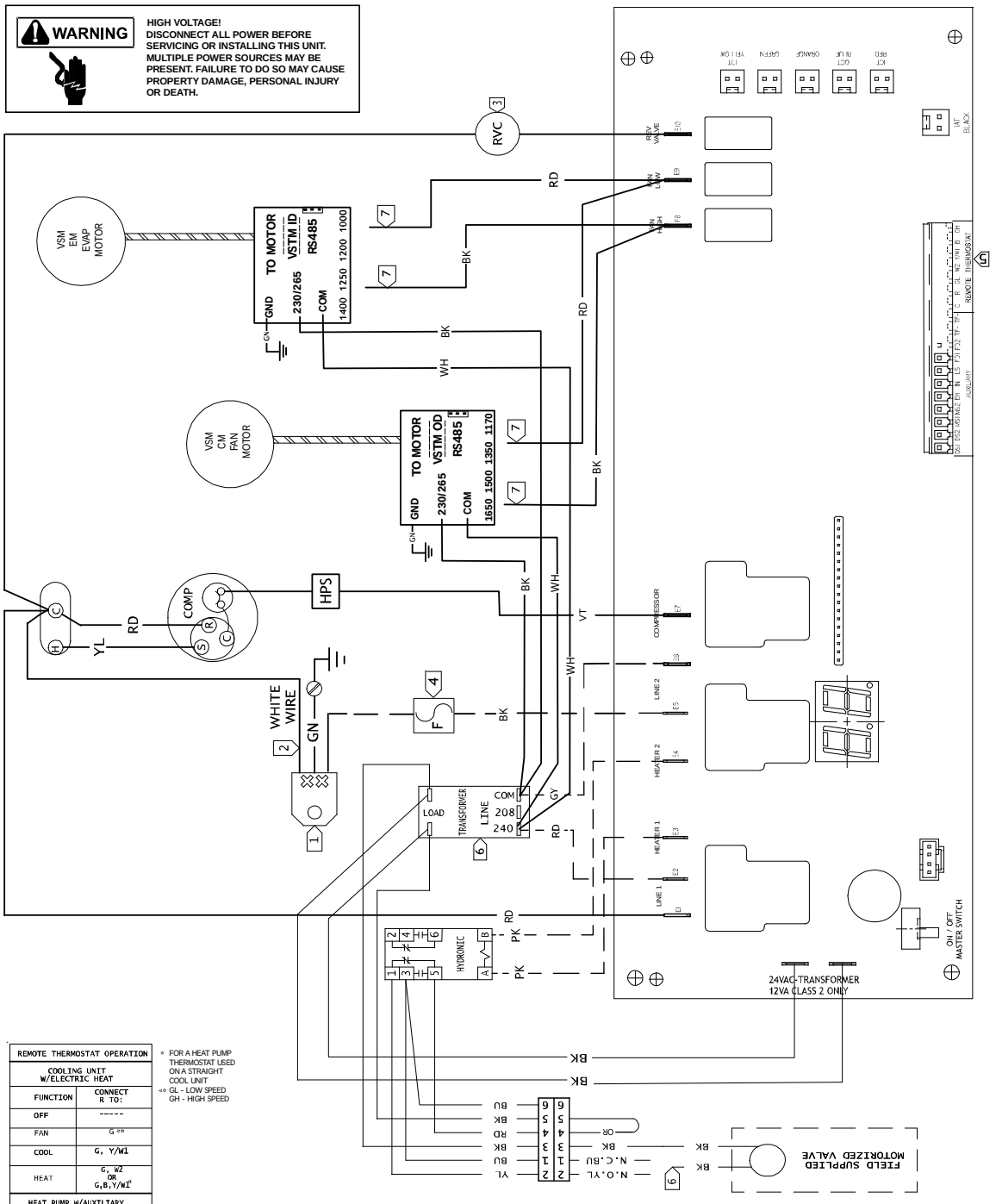


CM	OUTDOOR FAN MOTOR
COMP	COMPRESSOR
EM	EVAPORATOR MOTOR
FC	FAN CAPACITOR
F	FUSE
HPS	HIGH PRESSURE SWITCH
HTR	HEATER ELEMENT
R	RELAY
RCCF	RUN CAPACITOR FOR COMPRESSOR AND FAN
RVC	REVERSING VALVE
TR	TRANSFORMER
VSM	VARIABLE SPEED MOTOR
VSTM	VARIABLE SPEED TERMINAL BOARD

IO-441
2/2013

Wiring is subject to change.

PGAN with Hydronic Heat, Variable Speed Condenser and Evaporator Fan Motors



REMOTE THERMOSTAT OPERATION	
COOLING UNIT W/ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G **
COOL	G, Y/W1
HEAT	G, W2 OR G,B,Y/W1*
HEAT PUMP W/AUXILIARY ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G**
COOL	G, Y/W1
1ST STAGE HEAT	G,B,Y/W1
2ND STAGE HEAT	G, W2

* FOR A HEAT PUMP THERMOSTAT USED ON A STRAIGHT COOL UNIT
** GL - LOW SPEED
GH - HIGH SPEED

NOTES:
1. WARNING. DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
2. WHITE WIRE MUST BE CONNECTED AS SHOWN.
3. ON HEAT PUMP MODELS ONLY.
4. BK ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V. FOR 230V & 115 V, CONNECT POWER CORD TO LINE 2.
5. FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
6. 265 AND 115V TRANSFORMER NOT SHOWN.
7. SEE TABLE FOR MOTOR SPEED SELECTION.

USE COPPER CONDUCTORS ONLY

CHASSIS — GN1 — CONTROL PANEL

WIRE LEGEND
- HIGH VOLTAGE (FACTORY)
- HIGH VOLTAGE (FACTORY OR FIELD)
- LOW VOLTAGE (FACTORY OR FIELD)
- HIGH VOLTAGE DC HARNESS (FACTORY)

CM	OUTDOOR FAN MOTOR
COMP	COMPRESSOR
EM	EVAPORATOR MOTOR
FC	FAN CAPACITOR
F	FUSE
HPS	HIGH PRESSURE SWITCH
HTR	HEATER ELEMENT
R	RELAY
RCCF	RUN CAPACITOR FOR COMPRESSOR AND FAN
RVC	REVERSING VALVE
TR	TRANSFORMER
VSM	VARIABLE SPEED MOTOR
VSTM	VARIABLE SPEED TERMINAL BOARD

Indoor Motor Speed Selection		
Model or Mfg. # Starts With	High Speed VSTM Black	Low Speed VSTM Red
MTC07	1400	1250
MTC09	1400	1250
MTC12	1400	1250

Outdoor Motor Speed Selection		
Model or Mfg. # Starts With	High Speed VSTM Black	Low Speed VSTM Red
MTC07	1350	1170
MTC09	1350	1170
MTC12	1350	1170

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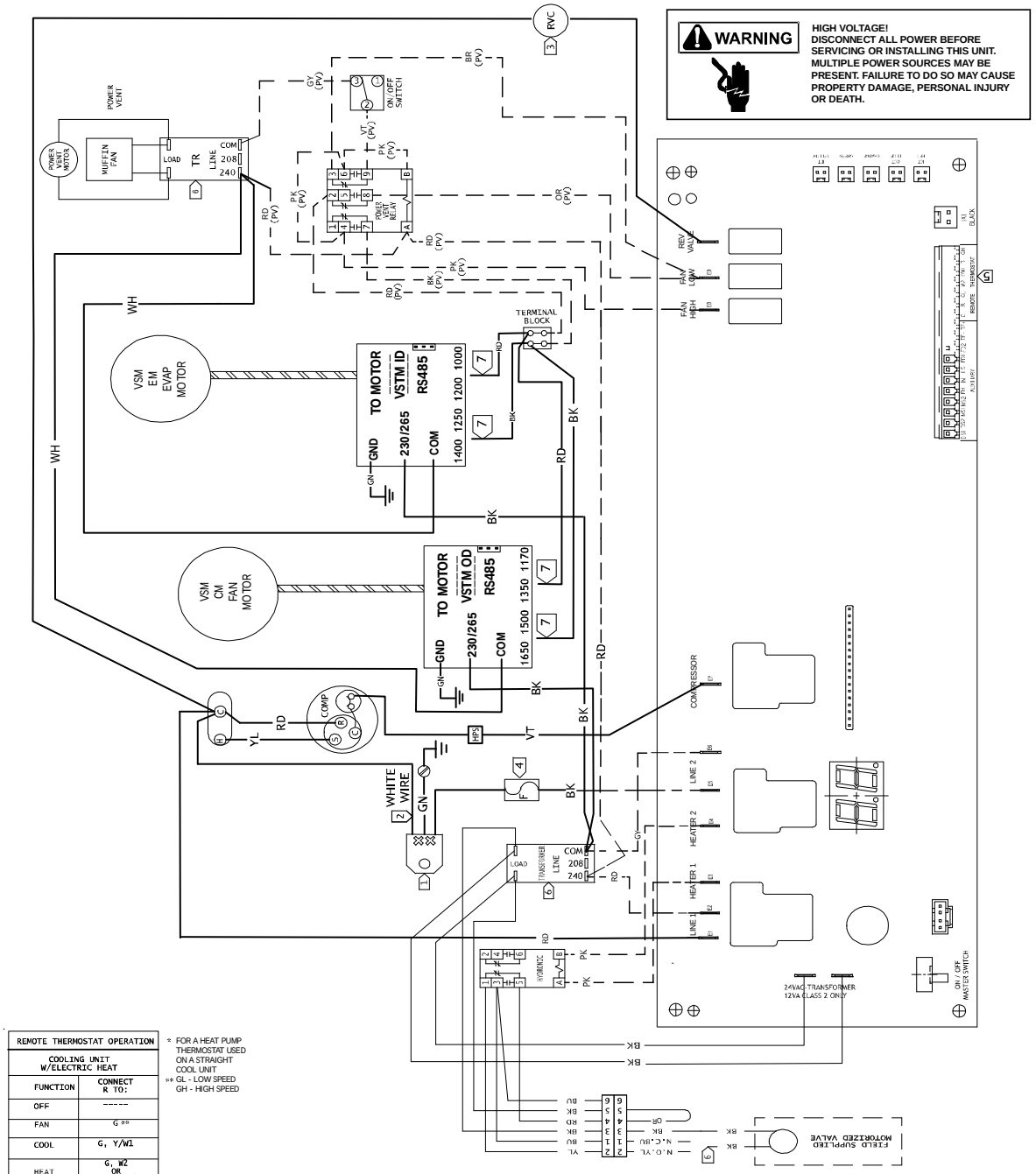
Wiring is subject to change.

Wiring Diagram

PGAN with Hydronic Heat, Variable Speed Condenser, Evaporator Fan Motors, and Optional Power Vent and Door



REMOTE THERMOSTAT OPERATION	
COOLING UNIT W/ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G**
COOL	G, Y/W1
HEAT	G, W2 OR G,B,Y/W1*
HEAT PUMP W/AUXILIARY ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G**
COOL	G, Y/W1
1ST STAGE HEAT	G,B,Y/W1
2ND STAGE HEAT	G, W2

* FOR A HEAT PUMP THERMOSTAT USED ON A STRAIGHT COOL UNIT

** GL - LOW SPEED
GH - HIGH SPEED

NOTES:

1. WARNING: DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
2. WHITE WIRE MUST BE CONNECTED AS SHOWN.
3. ON HEAT PUMP MODELS ONLY.
4. BK ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V. FOR 230V & 115 V, CONNECT POWER CORD TO LINE 2.
5. FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
6. 265V AND 115V TRANSFORMER NOT SHOWN.
7. SEE TABLE FOR MOTOR SPEED SELECTION.

USE COPPER CONDUCTORS ONLY

CHASSIS — GN1 — CONTROL PANEL

WIRE LEGEND

- HIGH VOLTAGE (FACTORY)
- HIGH VOLTAGE (FACTORY OR FIELD)
- LOW VOLTAGE (FACTORY OR FIELD)
- HIGH VOLTAGE DC HARNESS (FACTORY)

CM	OUTDOOR FAN MOTOR
COMP	COMPRESSOR
EM	EVAPORATOR MOTOR
FC	FAN CAPACITOR
F	FUSE
HPS	HIGH PRESSURE SWITCH
HTR	HEATER ELEMENT
R	RELAY
RCCF	RUN CAPACITOR FOR COMPRESSOR AND FAN
RVC	REVERSING VALVE
TR	TRANSFORMER
VSM	VARIABLE SPEED MOTOR
VSTM	VARIABLE SPEED TERMINAL BOARD

Indoor Motor Speed Selection		
Model or Mfg. # Starts With	High Speed VSTM Black	Low Speed VSTM Red
MTC07	1400	1250
MTC09	1400	1250
MTC12	1400	1250

Outdoor Motor Speed Selection		
Model or Mfg. # Starts With	High Speed VSTM Black	Low Speed VSTM Red
MTC07	1350	1170
MTC09	1350	1170
MTC12	1350	1170

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2/2013

Wiring is subject to change.

Furnish and install where shown on plans packaged terminal air conditioners of the sizes and capacities shown on the schedule. The units shall be located as shown on the drawings and shall include cabinet/wall sleeve, chassis, outdoor louver, hydronic heat section, valve, and room cabinet. All units shall be ETL listed for safety and AHRI certified for performance. Overall dimensions for the basic unit shall not exceed 52" wide, 22-1/2" high, and 17-3/4" deep. Overall dimensions of the wall sleeve shall be 16" high, 42" wide and (13-3/4"/_____) deep. All units shall operate on _____ volts, 60 Hz, 1 phase power. (Units furnished with hydronic heat shall not exceed 43" wide, 24-1/2" high and 20" deep).

The minimum energy efficiency ratio (EER) in BTU per hour per watt for each PGAN unit must be in compliance with ASHRAE 90.1 replacement or new construction criteria, for all sizes using R-410A Refrigerant.

Cooling chassis – Chassis shall be slide-in, plug-in type with a self-contained, hermetically sealed refrigerant circuit. All chassis sheet metal parts shall be constructed of either powder-coated A-60 or A-60 galvanized steel for maximum corrosion resistance. The chassis shall consist of the following components:

Vibration isolated compressor; rifled copper tubed evaporator and condenser coils with high efficiency raised lance aluminum plate fins mechanically expanded to the tubes for maximum heat transfer; and a capillary restrictor type refrigerant metering device. Hydronic coils shall be factory tested at 450 psig, and 600 psig for refrigerant coils. A positive closing (manual or optional automatic) fresh air damper may be located within the chassis to provide fresh air during fan operation.

Airflow system shall include separate fan motors for the condenser and evaporator sections. The condenser fan motor shall be a variable-speed, totally enclosed, permanently lubricated fan motor. Condenser fan shall be propeller-type with a slinger ring and shall be constructed of aluminum. The indoor fan motor shall be a two-speed, totally enclosed; permanently lubricated fan motor must be positioned on the indoor side of the bulkhead so as to be completely within the conditioned, filtered airstream. The indoor blower fan shall be a forward-curved tangential design to provide even airflow across the evaporator coil.

During the cooling cycle:

The compressor, the outdoor fan motor and the indoor fan motor shall be energized. Condensation accumulated on the evaporator coil shall be drained into the outdoor section where it is to be picked up by the condenser fan/slinger ring and evaporated against the outdoor coil. In the cool mode, the compressor will cut in if the space temperature is at least 1°F above the thermostat set point and will cut out when the space temperature is approximately 2°F below set point, subject to timing protections.

During the heating cycle:

Hydronic Heat – Only the indoor fan motor, the (normally open) (normally closed) valve and optional automatic fresh air damper shall be energized. The outdoor condenser fan motor and compressor shall not be energized.

When the control is in the heat mode and calling for heat, the indoor fan shall not turn on until the HFLO sensor is above 100°F. If at any time while the unit is in heat mode the HFLO sensor is below 90°F, the indoor fan shall turn off immediately. Control will check if the HFLO sensor temperature is above 100°F for 2 seconds before resuming indoor fan operation.

Control module – The PGAN Control module is used to control a PGAN unit that includes both an integral air conditioner and a source of heat. The Digital Control is operated with a unit mounted thermostat or 24 volt, Wall Mounted Thermostat.

Room freeze protection – When the unit senses temperatures of 40°F or lower in an unoccupied room, the heat mode is automatically initiated to prevent freezing. The outdoor fan and compressor are stopped to help prevent coil freeze.

Compressor protection – The life of the compressor is extended through built in protection logic such as:

- High temperature protection if the compressor temperature exceeds 154°F
- Minimum run time
- Minimum off time
- Random restart after a power outage

Inputs and outputs

The PGAN control module offers the following inputs:

1. Indoor Coil Sensor (ICS)
2. Indoor Air Sensor (IAS)
3. Inputs from Remote Thermostat (R, B, G, Y, W)
4. Heat Fan Lock Out Sensor (HFLO)
5. Power Supply, 24VAC

Guide Specifications

The PGAN control module offers the following outputs:

1. Compressor Output
2. Outdoor Fan
3. Indoor Fan Fan cycle or Fan Continuous and Blower Hi or Blower Lo shall be incorporated to allow either continuous or automatic fan cycle operation at the selected fan speed. When choosing automatic fan cycle operation, the fan shall be energized only when the Indoor Fan is operating.
4. Damper Control
5. Hydronic Valve

Digital Control – Shall have solid state digital control operated via a unit mounted thermostat or remote wall mounted thermostat. Shall include space temperature control and unit ON or OFF, and the following:

Cooling – Compressor and Outdoor fan, Indoor fan – HI, LOW, CONSTANT or FAN CYCLE, Auto Fresh Air damper (optional).

Heating – Hydronic Valve, Indoor fan – HI, LOW, CONSTANT or FAN CYCLE, Auto Fresh Air damper (optional).

Room Cabinet – Shall be flat top, wrap-around design with a heavy-gauge sheet metal front panel that is phosphatized and coated with a baked on, corrosion resistant finish. Room cabinets with ordinary enamel finish are not acceptable. Discharge grilles shall be tamper-proof. The control access door shall be mounted on the right-hand side.

Optional Fresh Air Damper – A positive closing automatic fresh air damper must be located within the chassis to provide fresh air during fan operation. It will be configurable for selection of AUTO operation or CLOSED.

Filtration (Standard) – Room side return air shall be completely filtered through a permanent, washable polypropylene mesh filter. Foam type filters are not acceptable. Filter must be a UL listed class II, 38% average arrestance efficiency (ASHRAE test) air filter with low resistance to airflow (0.02 w.g. at 300 CFM) and high dust holding capacity of 55 grams.

Wall Sleeve – Shall be entirely constructed of galvanized, phosphatized, heavy-gauge steel with an Antique Ivory powder paint corrosion resistant finish. Unpainted, galvanized steel wall sleeves with or without rust inhibiting spray are not acceptable. Wall sleeves with ordinary enamel finish are not acceptable. Wall sleeves shall be installed through the wall as shown on plans and shall have factory provisions for use of appropriate fastening devices to secure sleeve to the wall. In no event shall fasteners be installed through the basepan in the bottom of the cabinet/wall sleeve.

Outside Air Louvers – Shall be (stamped) (architectural) anodized aluminum as shown on plans. Louver shall be (finished natural) (painted) as shown on the schedule. Louvers shall be easily installed from the inside of the building after the cabinet/wall sleeve has been installed. Special field fabricated louvers must be approved by the PTAC manufacturer as to free area and air circulation requirements.

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